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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,252	09/18/2003	Tung-Lung Lin	ACMP0032USA	2251

27765 7590 12/16/2004

(NAIPC) NORTH AMERICA INTERNATIONAL PATENT OFFICE
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EXAMINER	
WHITTINGTON, KENNETH	
ART UNIT	**PAPER NUMBER**
2862	

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/605,252	LIN ET AL.	
	Examiner	Art Unit	
	Kenneth J Whittington	2862	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 11 is objected to because it appears to be a substantial duplicate of claim 10. Both claims 10 and 11 depend from claim 1 and relate to first and second elements. However, none of claims 1, 10 or 11 provide any features of the first and second elements. Without any description of the first and second elements, they are interchangeable and thus claims 10 and 11 are not distinct from each other. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, and the claims depending therefrom, are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap

between the elements. See MPEP § 2172.01. The omitted element is what material the first and second element are comprised. The invention relates to measuring the magnetic flux between the first and second elements. However, the claims provide no definition of the makeup of the first and second elements, thus, the first and second elements could made of any material, for example, an insulator. If the first and second elements were made of insulators, they would be invisible to magnetic flux and would not affect the detection of magnetic flux. Thus, for the invention to work as described in the Disclosure, the first and second would have to made of at least some material that can affect the magnetic flux generated.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kono et al. (US 2001/0009366).

Regarding claim 1, Kono et al. discloses a method for determining a relational position comprising:

positioning a first element and a second element (See Kono et al. FIG. 1, items 24 and 25);

providing a magnetic flux generator for generating a magnetic flux between the first and second elements (See FIG. 1, items 27);

providing a magnetic sensor for detecting the magnetic flux between the first and the second elements (See FIG. 1, items 31); and

adjusting a relative position of the first and the second elements until the magnetic flux detected by the magnetic sensor reaches a predetermined value (See FIG. 3 and note that for each angle desired, the detector is rotated until a predetermined flux density for that angle is achieved).

Regarding claim 2, Kono et al. discloses the magnetic flux generator being a magnet (See Kono et al. FIG. 1, items 27).

Regarding claim 3, Kono et al. discloses the magnetic sensor being a Hall element (See Kono et al. page 2, paragraph 0046).

Regarding claim 3, Kono et al. discloses an amplifier amplifying the voltage from the Hall element (See Kono et al. page 2, paragraph 0046).

Regarding claim 5, Kono et al. discloses the magnetic sensor being an MR element (See Kono et al. page 6, paragraph 0085).

Regarding claims 10 and 11 in view of the objection above, Kono et al. discloses the magnetic flux generator is set on one end of the one of the first or second element and the magnetic sensor is set on one end of the other of the first and second element (See Kono et al. FIG. 1).

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka (US 4,657,451). Regarding claim 1, Tanaka discloses a method for detecting contact comprising:

positioning a first element and a second element (See Tanaka FIG. 1, items 4 and 5);

providing a magnetic flux generator for generating a magnetic flux between the first and second elements (See FIG. 2, item 7);

providing a magnetic sensor for detecting the magnetic flux between the first and the second elements (See FIG. 2, item 12); and

adjusting a relative position of the first and the second elements until the magnetic flux detected by the magnetic sensor reaches a predetermined value (See Tanaka col. 4, lines 3-25).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kono et al. in view of Ghibu et al. (US 3,849,724). Kono et al. teaches each and every feature of claim 1 as noted above. However, Kono et al. does not explicitly use of a magnetic diode. Ghibu et al. teaches the use of a magnetic diode (See Ghibu et al. col. 6, lines 1-19). It would have been

obvious to a person having ordinary skill in the art to use the magnetic diode in lieu of the Hall sensor in the apparatus of Kono et al. because such sensors, as well as inductions coils, are well known alternatives in the art for measuring magnetic flux (See Ghibu et al. col. 6, lines 1-19).

8. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka in view of admitted prior art. Tanaka teaches each and every feature of claim 1 as noted above. However, Tanaka does not teach the first element being a screwdriver and the second element being a screw. The admitted prior art teaches an assembly line machine for locating and adjusting screws in a device during a fine-tuning process (See Disclosure pages 2-4, paragraphs 0005 and 0006). It would have been obvious to use the contact detector arrangement of Tanaka in the fine-tuning process of the admitted prior art, such that the tool is a screwdriver and the workpiece is a device with a screw therein. One having ordinary skill in the art would have been motivated to do so to provide a reliable indication that the tool (screwdriver) and the workpiece (screw in the device) are in contact with each other so a machining or tuning operation can begin (See Tanaka col. 1, lines 5-15 and col. 1, line 63 to col. 2, line 2).

Regarding claim 8, the admitted prior art discloses the screw installed on a metal plate (inherent in the devices described in the Disclosure on pages 1-4, paragraphs 0004-0006).

Regarding claim 9, Tanaka teaches securing one or both of the exciting and detecting coils either to the machine adjacent the workpiece or on the framework (See Tanaka col. 5, line 58 to col. 6, line 2), in addition to securing one or both of them to the toolhead nears the tool (screwdriver) as shown in FIG. 1 of Tanaka.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Juengel (US 4,401,945), Tomita et al. (US 4,408,933) and Shum et al. (US 4,000,448) each disclose contact detectors for various machines. Karna et al. (US 4,878,020), Alich (US 3,902,114) and Guyot et al. (US 6,060,880) each discloses devices for measuring a gap between ferromagnetic objects. Schneider et al. (US 5,521,497) discloses movable members with the sensor offset from the magnets. Hoe et al. (US 6,681,659) discloses a screw placement apparatus. Nyce et al. (US 6,600,310) discloses a displacement sensor with the magnetic sensor to the side.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth J Whittington whose telephone number is (571) 272-2264. The examiner can normally be reached on Monday-Friday, 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (571) 272-2233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kenneth J Whittington
Examiner
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